THE

JOURNAL

OF

Nervous and Mental Disease.

Vol. VII. OCTOBER, 1880. No. 4.

Original Articles.

ART. I.—PLAN OF THE CEREBRO-SPINAL NERVOUS SYSTEM.*

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WE accept the motions of protoplasm as evidence of life, and yet ungrouped elementary atoms are subject to the play of physical forces which become known as modes of motion: sound, heat, light, electricity, etc., through the changes in place of atoms and molecules.

Inasmuch as sensations have for their ultimate expression motion in the living organism, cause and effect exchange places in the recognition that forces are manifest to us as sensation only in the molecular movements caused by forces. These molecular movements impress us as sensations which, of necessity, must be translated into some form or forms of motion.

Sensibility and motility, then, are sequentially convertible

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* Read before the Boston meeting of the American Association for the Advancement of Science, August 29th, 1880.

ganglia, and still maintain resemblance to these ganglia in many particulars.

5. *The præ-frontal lobe is the last intervertebral ganglion to develop.* It grows larger in the scale of intelligence and presses the occipital (see the brains of monotremes and marsupials) backward, downward and forward, thus forming the temporal (or what has been erroneously termed the middle) lobe.

6. The cerebro-spinal nerves, in some cases, preserve their original projections from and to muscles, but these nerves may also have not only a distribution to the viscera, as has the pneumogastric, but may also project into and from *other system-centres.* The lateral columns of the spinal cord, the tegmentum and crura cerebri in their main mass may thus be regarded as cerebro-spinal nerves of the highest series, having lower system-centres for peripheries. The præ-frontal lobes thus exert an inhibitory control over the highest centres, because such centres are peripheries for the nerves of these foremost ganglia.